

CLAIMS

1. A liquid composition which is to flow through a channel in which a silicon-containing material is exposed, the composition containing:
 - a solvent; and
 - a hydrophobic colloid that is charged with a positive zeta position when the pH of the composition is controlled to a range of over 4 and under 6.
2. The composition according to claim 1, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and iron hydroxide.
3. The composition according to claim 1, further containing more than 3 ppm of the hydrophobic colloid.
4. A recording liquid which is guided to a nozzle through a channel in which a silicon-containing material is exposed, and sprayed as droplets from the nozzle for adhesion to an object, the liquid containing:
 - a pigment;
 - a solvent in which the pigment is dispersed; and
 - a hydrophobic colloid that is charged with a positive zeta potential when the pH of the liquid is controlled to a range of over 4 and under 6.
5. The liquid according to claim 4, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and

iron hydroxide.

6. The liquid according to claim 4, further containing more than 3 ppm of he hydrophobic colloid.

7. A liquid cartridge including a spraying means for spraying, as droplets from the nozzle, a recording liquid guided to a nozzle through a channel in which a silicon-containing material is exposed,

the cartridge being to be housed removably in a spraying means of a liquid spraying apparatus which sprays the liquid as droplets for adhesion to an object, and serve as a source of the recording liquid for the spraying means of the liquid spraying apparatus; and

the recording liquid containing:

a pigment;

a solvent in which the pigment is dispersed; and

a hydrophobic colloid that is charged with a positive zeta potential when the pH of the liquid is controlled to a range of over 4 and under 6.

8. The cartridge according to claim 7, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and iron hydroxide.

9. The cartridge according to claim 7, further containing more than 3 ppm of he hydrophobic colloid.

10. A liquid spraying cartridge which is to be housed removably in a liquid spraying

apparatus which sprays a recording liquid for adhesion to an object to make recording to the object, the cartridge comprising:

a liquid container which contains a recording liquid; and

a spraying means which guides the recording liquid from the liquid container to a nozzle via a channel in which a silicon-containing material is exposed and sprays the recording liquid as droplets from the nozzle,

the recording liquid containing:

a pigment;

a solvent in which the pigment is dispersed; and

a hydrophobic colloid that is charged with a positive zeta potential when the pH of the liquid is controlled to a range of over 4 and under 6.

11. The cartridge according to claim 10, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and iron hydroxide.

12. The cartridge according to claim 10, further containing more than 3 ppm of the hydrophobic colloid.

13. The cartridge according to claim 10, wherein the silicon-containing material is a silicon wafer.

14. The cartridge according to claim 10, wherein the nozzles are arrayed in a nearly straight line.

15. A liquid spraying apparatus which makes recording to an object by making a

recording liquid adhere to the object, the apparatus comprising:

a spraying means for spraying, as droplets from the nozzle, the recording liquid, guided to a nozzle via a channel in which a silicon-containing material is exposed; and

a liquid cartridge serving a source of the recording liquid for the spraying means,

a liquid container which contains a recording liquid,

the recording liquid containing:

a pigment;

a solvent in which the pigment is dispersed; and

a hydrophobic colloid that is charged with a positive zeta potential when the pH of the liquid is controlled to a range of over 4 and under 6.

16. The apparatus according to claim 15, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and iron hydroxide.

17. The apparatus according to claim 15, further containing more than 3 ppm of the hydrophobic colloid.

18. The apparatus according to claim 15, wherein the silicon-containing material is a silicon wafer.

19. The apparatus according to claim 15, wherein the nozzles are arrayed in a nearly straight line.

20. A liquid spraying method for a liquid spraying apparatus which makes recording to an object by making a recording liquid adhere to the object, wherein:

the recording liquid contains:

a pigment;

a solvent in which the pigment is dispersed; and

a hydrophobic colloid that is charged with a positive zeta potential when the pH of the liquid is controlled to a range of over 4 and under 6; and

the recording liquid is guided to a nozzle via a channel in which a silicon-containing material is exposed, and sprayed as droplets from the nozzle.

21. The method according to claim 20, wherein the hydrophobic colloid contains one or a mixture of more than one, selected from alumina, cerium oxide, barium oxide and iron hydroxide.

22. The method according to claim 20, wherein the recording liquid further contains more than 3 ppm of the hydrophobic colloid.